

WHAT IS CLAIMED IS:

1. A supplemental restraint system for use in a vehicle comprising:
a harness comprising a plurality of belts for attachment to the restraint system of an automobile;
the harness being wearable by a rider in the vehicle such that when the rider wears the harness the rider is secured to the seat of the automobile such that the rider remains secured against the seat of the automobile notwithstanding the motion of the vehicle.
2. The supplemental restraint system of claim 1, wherein the belts are arranged such that the vehicle restraint system, comprising a lap belt works in conjunction with the harness.
- Sub 217 3. The supplemental restraint system of claim 1, wherein the belts are arranged such that the vehicle restraint system, comprising a lap belt and shoulder belt, works in conjunction with the harness to form a five-point restraint system.
4. The supplemental restraint system of claim 2, including one or more tethers securing the harness to the seat.
5. The supplemental restraint system of claim 1, wherein the restraint system of the vehicle includes at least one tether anchor and the supplemental restraint system includes at least one tether attachable to the harness and the tether anchor.
6. The supplemental restraint system of claim 5, wherein the tether comprises a strap having a first and second end, the first end of the strap being attachable to the harness and the second end of the tether being attachable to a tether anchor.

7. The supplemental restraint system of claim 5, wherein the tether is Y-shaped such that upper two parts of the Y-shaped tether can be attached to the harness and the lower single part of the Y-shaped tether can be attached to a tether anchor.

8. The supplemental restraint system of claim 1, wherein the vehicle restraint system comprises shoulder belts and the harness has means to secure the shoulder belt and harness together.

9. The supplemental restraint system of claim 1, wherein said harness is comprised of a plurality of belts worn about the upper torso of a user, such that a first one of said plurality of belts is worn approximately about the waist of the user and at least one of the plurality of belts is attached to said first one of said plurality of belts and extends over a shoulder of the user.

10. The supplemental restraint system of claim 8, wherein said harness is comprised of a first shoulder strap, having a first and second end, and a second shoulder strap, having a first and second end, said shoulder straps being spaced apart and generally parallel to one another at said first end of each of said shoulder straps, such that said first and second shoulder straps extend from approximately waist-height at the front of a user, over the shoulders of the user, to approximately waist-height at the rear of the user, the harness further comprising a third strap, having a first and second end, attached to said first and second ends of both said first and second straps, generally perpendicularly, at said front and rear of said user, such that said third strap extends circumferentially about said user, at about waist-height, said third strap having first and second end attachment points and being of a length such that said first and second ends of said third strap may be attached to the attachment points such that said first and second ends of said third strap overlap one another.

11. The supplemental restraint system of claim 10, wherein said first and second shoulder straps of said harness are arranged such that said first shoulder strap crosses over said second shoulder strap at the rear of said user, forming an X-shape.

12. The supplemental restraint system of claim 7, wherein at least one of said straps is adjustable.

13. A supplemental restraint system for use in a vehicle having a restraint system including a lap belt and shoulder belt, comprising:

a harness having a plurality of straps for attachment to the restraint system of an vehicle;

at least one of the straps being adjustable such that the harness can be worn by a variety of persons;

the harness having means to removeably attach the straps to the lap and shoulder belt of the vehicle;

the harness being wearable by a rider in the vehicle such that when the rider wears the harness, and the harness is secured to the lap and shoulder belt of the vehicle, the rider is secured to the seat of the vehicle, in a five-point restraint system, such that the rider remains secured against the seat of the vehicle notwithstanding the motion of the vehicle.

14. The supplemental restraint system of claim 13, wherein said harness is comprised of a first shoulder strap, having a first and second end, and a second shoulder strap, having a first and second end, said shoulder straps being spaced apart and generally parallel to one another at said first end of each of said shoulder straps, such that said first and second shoulder straps extend from approximately waist-height at the front of a user, over the shoulders of the user, to approximately waist-height at the rear of the user, the harness further comprising a third strap, having a first and second end, attached to said first and second ends of both said first and second straps, generally perpendicularly, at said front and rear of said user, such that said third strap extends circumferentially about said user, at about waist-height, said third strap having

first and second end attachment points and being of a length such that said first and second ends of said third strap may be attached to the attachment points such that said first and second ends of said third strap overlap one another.

15. The supplemental restraint system of claim 14, wherein said first and second shoulder straps of said harness are arranged such that said first shoulder strap crosses over said second shoulder strap at the rear of said user, forming an X-shape.

16. The supplemental restraint system of claim 14, wherein at least one of said straps is adjustable.

July 27 17. The supplemental restraint system of claim 13, wherein the restraint system of the vehicle includes at least one tether anchor and the supplemental restraint system includes at least one tether attachable to the harness and the tether anchor.

18. The supplemental restraint system of claim 17, wherein the tether comprises a strap having a first and second end, the first end of the strap being attachable to the harness and the second end of the tether being attachable to a tether anchor.

19. The supplemental restraint system of claim 17, wherein the tether is Y-shaped such that upper two parts of the Y-shaped tether can be attached to the harness and the lower single part of the Y-shaped tether can be attached to a tether anchor.

20. The supplemental restraint system of claim 13, wherein the vehicle restraint system comprises shoulder belts and the harness has means to secure the shoulder belt and harness together.

21. A method of enhancing the safety of a rider including the steps of:
providing a vehicle restraint system comprising a seat belt and shoulder belt;
providing a supplemental restraint system comprising a harness, the harness being removably attachable to the vehicle restraint system such that when the supplemental restraint system and vehicle restraint system are attached together a five point restraint is formed;
placing the harness on a person and attaching the harness to the vehicle restraint system.
22. The method of enhancing the safety of a rider of claim 21, including the steps of providing a tether anchor in a vehicle and a tether attachment point on the harness and attaching a tether to the vehicle tether anchor and to the harness.
- 23 The method of enhancing the safety of a rider of claim 21, including the step of constructing the harness such that the harness can be adjusted to fit persons of a plurality of sizes.